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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION 5**  
**77 WEST JACKSON BOULEVARD**  
**CHICAGO, IL 60604-3590**

REPLY TO THE ATTENTION OF:

**MEMORANDUM**

**SL-10C**

**DATE:** April 7, 1992

**SUBJECT:** Soils and Drinking Water Data for Granite City, IL  
ATSDR Study (Cd & Pb)

**FROM:** David A. Payne, Chief *DA Payne*  
Laboratory Scientific Support Section  
Central Regional Laboratory

**TO:** Brad Bradley, Environmental Engineer  
IL/IN Remedial Response Branch  
Office of Superfund

During February/March 1992, Ecology & Environment has tabulated cadmium (Cd) and lead (Pb) results for the 400 soils and 400 residential well water samples collected from Granite City, IL, along with the results provided by our laboratory for 59 dust samples from the residences. Review of tabulated soil data by our Section indicated blind field duplicate results for soils sent to the Contract Laboratory Program (CLP) lab were of undesirable precision.

During March 1991, the CLP lab retested 10 sets of field duplicates (no longer blind). Each field duplicate soil was also retested in duplicate so that we have 4 Cd and 4 Pb values for each set of duplicates. The retested field duplicates are unlike the initial soils data tabulated by Ecology & Environment. The CLP lab offered to retest the soils free-of-charge to EPA on March 27, 1992, because they and I believe there is some problem in sample preparation technique(s) - not instrumental measurements. The soils data for the last 350 samples sent to the CLP lab must be considered not acceptable at this time.

On April 2, 1992, we formally requested SMO for a reanalysis of all 400 soils.

On April 3, 1992, I reviewed again all soils and water data tabulated by Ecology & Environment. The following observations were made:

1. Blind field duplicate results (except 1 pair) associated with the 400 drinking waters were of acceptable precision. We plan to audit these analyses (20 to 30 samples) by split-sample analyses at the CRL. The CLP analyses appear reasonable at this time.

2. Blind field duplicate results associated with the first 59 soil samples were reviewed. There are seven sets of blind field duplicates with the 59 soils. Precision of results are acceptable, but these samples will be retested by CLP lab.
3. Previous review of blind field duplicates results for last 350 soil samples showed unacceptable results. Reanalysis of 10 pairs of field duplicates indicates initial data currently tabulated by Ecology & Environment to be unusable at this time. All 350 soils will be retested by CLP lab. We plan to audit the analysis at the CRL by testing 20-30 soils as split-samples.
4. Amazingly, field duplicates tested by the CRL for 59 dusts are acceptable precision. It is amazing based on visual observation of these duplicates with variable hair balls and carpet fibers.

We plan to visit the CLP lab this month to evaluate further their analysis procedures as it is the lab currently testing 210 dust samples. The visit is being worked out with SMO and EPA Project Officer for SMO.

cc: W. Sanders, ESD  
P. Reed, ESD  
C.T. Elly, CRL  
L. Fabinski, ATSDR